tolerance" required in that meridian. Since the anterior-posterior correction in that meridian is known for all eyes, this correction may be subtracted from the above negative tolerance and the remaining tolerance may be substituted in the formulae involving K_1 to determine the value of this constant. This value of K_1 may then be used to determine the "tolerance" in all other (eight are usually sufficient) meridians of the same eye. Inasmuch as there are two torques involved and the value of K_1 will be different for each torque, then the looseness must be observed in the temple portion of the eye for the value K_1 for the vertical torque (horizontal forces) and in the inferior portion of the eye for the value of K_1 for the horizontal torque (vertical force).

The contact lens, preferably made from a mold of the eye in accordance with the teachings outlined herein, and preferably provided with one or more "beads", finds convenient application to certain cases where it is necessary that the glass corneal section contain a filter, especially in cases of marked photophobia (intolerance to light), cases of albinism, or where the contact lens is to be used under conditions of excessive light, such as mountain climbing, seashore, water and snow glare.

The use of colored filters in the glass portion may also be used to change the color of the iris in the eye, so that by a suitable selection, a blue-eyed person may be made to appear brown-eyed.

Another variation of this filter in the corneal glass section may take the form of a pinhole opening. The entire corneal glass can be made opaque, except for a small clear portion of the size of 1 or more millimeters. This would be useful in cases where no pigment existed in the iris at all, or some anomaly existed in the lens of the eye, such as partial cataracts. Such a lens, having a pinhole opening in the corneal section, could also be used for experimental purposes where it is important to have a constant size pupil. Similarly, by having more than one pinhole opening in the corneal section of a contact lens, it would be possible to conduct certain experiments in physiological optics.

There are certain cases where the sclera of the eye lacks sufficient pigment, resulting in light entering the eye through the sclera. This is true in cases of albinism. It is proposed to tint the transparent scleral portion of the contact lens with a suitable coloring material, or to make such scleral portion of an opaque material.

Another use for the contact lens, as designed above, is in cases of deformed eyes, due to anomalies at birth or subsequently injury. In such cases, as well as in cases of crossed eyes, the corneas are turned in, out, up or down. It is possible, by properly displacing the corneal glass section of the contact lens, to make the eye appear as though it were perfect.

Other applications of the invention lie in the use of contact lenses whose corneal sections are made with two or more different refractive powers. In many cases it is required to have a bifocal correction. This bifocal or two-vision glass can be made in this contact lens by using for the corneal lens portion a lens, the upper part of which is fitted for the patient's distance vision, the lower part of which is fitted for the patient's reading vision. Such a lens, preferably made from a mold of the eye and provided with one or more "beads", is shown in Fig. 7.

In the same way, it is possible to make the corneal section of three or more different refractive sections. Such lenses are termed trifocal or multifocal lenses. Examples of these are shown in Figs. 8 and 9, and may include one or more "beads" on the surfaces of the scleral rim in the manner shown in any of the Figures 1 to 7.

By the term "bead", as used in the foregoing description and appended claims, it is to be distinctly understood is meant any projection or raised portion of any shape whatsoever which extends from an absolutely uniform surface of the lens. Thus where discontinuous beads are used, the beads may comprise triangular projections whose apices are rounded, which projections protrude from an otherwise uniform inner or outer surface.

What is claimed is:

1. A process of producing a contact lens which includes the steps of obtaining an impression of the eye, forming a mold from said impression, providing an indentation in said mold for the purpose of forming a bead on the inner surface of the scleral portion of the lens, depositing a suitable layer of wax and an overall metallic layer on said mold, investing said covered mold in a flask, effecting evacuation of the wax to produce a metal walled negative whose internal dimensions generally conform with the outer surface of the scleral portion of said lens, filling the metal walled negative with suitable material to form the scleral portion of said lens, forming from the original mold a metallic lined model whose external dimensions generally conform to the dimensional requirements of the inner surface of said lens, and hardening said suitable material to conform with the internal dimensions of said negative and the external dimensions of said metallic lined original mold, to form the lens.

2. A contact lens comprising a glass corneal lens portion and a scleral rim portion of moldable synthetic resin shaped to rest on the sclera of an eye to hold the corneal lens portion in position before the cornea, said scleral rim portion having its contacting surface formed with projections and depressions so that only the projections contact the sclera and the area of contact is thus reduced.

WILLIAM FEINBLOOM.